2/14/83 R5650-2 a

JAPAN · ECONOMIC · INSTITUTE

JEI

REPORT

No. 5A February 4, 1983

U.S.-JAPAN MILITARY TECHNOLOGY EXCHANGES

Summary

When Prime Minister Yasuhiro Nakasone recently decided to allow transfers of Japanese defense-related technologies to the United States, the decision was ballyhooed by the media as a major shift in Tokyo's longstanding "Three Principles on Arms Exports" banning the export of military hardware and weapons technologies. U.S. sources contend, however, that it will probably be quite some time before actual exchanges take place. First, the agreement as it currently stands is strictly "in principle;" that is to say, diplomatic notes have yet to be exchanged that would establish bureaucratic procedures for evaluating and approving such transactions. Second, while there have been reports that Washington is interested in Japan's microchips and fiber-optic technology as well as production technologies, authorities stress that there is no definitive list of technologies in which the United States is interested -- primarily because Japan's indigenous military technology is less sophisticated than that of the United States.

The conclusion, therefore, that Japan is now on its way to becoming a major weapons exporter and will eventually compete with the United States in the global arms market appears greatly exaggerated. The decision is better viewed as a political symbol which reflects Japan's recognition that the mutual security arangement now requires more reciprocal cooperation. When the government-to-government agreement is finally negotiated, one can expect a lengthy exploratory period which will probably culminate in transfers of complementary technologies, rather than the export of entire Japanese weapons systems.

Washington's Interest in Reciprocal Technology Flows

Media coverage of the Nakasone Cabinet's recent decision to permit greater two-way flows of defense-related technologies has created a rather inaccurate impression of U.S. pressure on this issue. Washington did not initially raise the question of technology exchanges in a June 1981 meeting between Defense Secretary Caspar Weinberger and former Japanese Defense Agency Director Joji Omura. While it cannot be denied that it took considerable political courage for the new premier to act decisively on a security-related matter so early in his tenure, it is important to understand that the problem of technology transfers was hardly a new one for the prime minister or his predecessor, Mr. Suzuki, since it has been under discussion at the working level for close to three years.

In the spring of 1980, the two governments agreed to institute the Systems and Technology Forum (S&TF), a bilateral group comprised mainly of Defense Department and Japanese Defense Agency (JDA) personnel, to consider how Washington and Tokyo might cooperate in developing defense-related technologies to carry out their designated roles and missions. From the U.S. viewpoint, it was readily apparent that the goal was a two-way exchange of military technology. Because of the limited capabilities of Japan's indigenous defense industry, the American S&TF participants did not request a definitive list of technologies that U.S. defense planners and manufacturers wanted to acquire from Japan. Nor was there any expectation that these transfer arrangements could be worked out in the immediate future. However, in view of the technological prowess that Japanese companies have demonstrated in electronics and other civilian industries, Washington envisoned the possible "marriage" of complementary capabilities farther down the road; it anticipated a positive-sum result which would both reduce expenditures and expand the research and production capabilities of both parties.

U.S. officials also emphasized that such arrangements would be in complete accord with each country's treaty obligations. The U.S.-Japan Mutual Secrity Treaty (MST) stipulates that both countries shall maintain and develop each other's defense capability through mutual cooperation, while the Mutual Defense Assistance Agreement of 1954 includes provisions for an exchange of technology and know-how at the request of either government. Finally, Washington pointed out, since the 1950s, technology flows to Japan have been strictly one-sided. As an ally that has long since outgrown the postwar "patron-ward" relationship, officials said, a more reciprocal arrangement such as we have with NATO member countries is now in order.

But when the United States spelled out these implications, Tokyo balked, contending that consideration of such ventures threatened to contravene its ban on weapons exports. Essentially, this policy is outlined in the "Three Principles on Arms Exports" adopted in 1967. The ban prohibits exports to: (1) communist countries; (2) countries under United Nations sanction; and (3) countries involved or likely to become involved in a conflict. In 1976, Tokyo stiffened the ban further by restricting the export of defense equipment to any country at all. Thus, when it became clear that the S&TF would, in effect, set the stage for eventual bilateral exchanges of military technology, the Japanese participants immediately withdrew to consider whether this was possible within the context of the sacrosanct principles.

The Omura-Weinberger meeting in June 1981 was actually the first time the issue of defense technology exchanges was addressed at the Cabinet level. In raising the matter at a high-level meeting, the United States intended not only to underscore its importance to the overall U.S.-Japan defense relationship, but also to expedite the

The JEI REPORT (ISSN 0744-6489) is published weekly for $40 per year by the Japan Economic Institute of America, 1000 Connecticut Avenue, N.W., Washington, D.C. 20036. Second class postage paid at Washington, D.C. POSTMASTERS: Send address changes to JEI, 1000 Connecticut Avenue, N.W., Washington, D.C. 20036.

laborious inter-ministerial consensus-building process. The fact that Tokyo appeared to be dragging its feet for over a year had further inflamed an atmosphere already tense with charges that unfair trading practices had stimulated Japan's burgeoning trade surplus.

For U.S. congressmen from areas of high unemployment, the trade and defense issues became inextricably linked. Indeed, they argued that since Japan had to spend so little (less than 1 percent of GNP) on defense, it could afford to plow the extra money into developing consumer goods that displaced American workers. Tokyo's reticence about sharing defense technology with its chief ally and trading partner therefore provided further evidence of how inequitable the bilateral relationship was in all its aspects. It also directed attention to our arms co-production programs with Japan. One Congressman successfully amended the 1982 Defense Appropriations Act to prohibit joint ventures on a weapons system developed by an arsenal in his district (see JEI Report No. 19A, May 14, 1982).

Legislators have charged that these programs amounted to a technology grab by the Japanese, who would "do to other industries [chiefly the civil aviation industry] what they did to Detroit." In a General Accounting Office (GAO) investigation, the results appear at first glance to substantiate this contention. Using the McDonnell-Douglas Corp.'s F-15 co-production project as its focus, the agency said that the transfer of U.S. technology has contributed and will continue to contribute directly to Japan's ability to develop a world-class civil aircraft industry, and concluded that its aircraft production base had been enhanced by U.S. research and technology.

Although the GAO's conclusion was strongly refuted by major actors in the State and Defense Departments, who have consistently argued that U.S.-Japan trade and defense problems must be handled separately, it was clear that the logjam over technology transfers further exacerbated the climate and made the separation and resolution of these issues extremely difficult. The subject became a symbol of Tokyo's rigidity in dealing with bilateral problems. Thus, with the bilateral trade deficit reaching record highs, the chorus of complaints concerning Japan's restrictive trading practices growing even louder, and Tokyo's 1983 defense budget falling far below U.S. recommendations for an effective defense program, U.S.-Japan relations -- on the eve of the prime minister's January visit to Washington -- appeared to be headed for rough sailing.

The Nakasone government steered clear of a head-on collision by, among other things, offering to agree "in principle" to reciprocal military technology exchanges. At this stage, however, it would be premature for Washington to consider the issue resolved since an official agreement between the two governments has yet to be negotiated. Until bureaucratic procedures for evaluating and approving such transactions are established, joint military research and development efforts are still barred. The relevant ministries must now decide among themselves and in consultation with the United States on an internal review mechanism for technology exchanges. According to informed sources, these discussion may take most, if not all, of this year.

Japan's Internal Debate on Technology Transfers

Under the Arms Export Control Act, specific procedures must be followed in evaluating and approving transfers of U.S. military technology and equipment. If an American company is asked by a Japanese defense manufacturer for assistance in building a particular weapon, the U.S. firm applies to the Office of Munitions Control in the State Department for a license to sell hardware and/or transfer technology to the Japanese firm. The State Department reviews the request, refers it to the Office of Research and Engineering at the Defense Department for technical review, and after the Pentagon signs off on it, issues the American company an export license.

In Japan, however, no comparable review process exists. Some attribute the apparent inconsistencies in Tokyo's weapons export policy to this administrative weakness. For example, two years ago, a Japanese munitions company exported semi-finished gun barrels (referred to as "steel pipes" in the original export license application) to South Korea. The transaction sparked a furor in the Diet over the apparently lax enforcement of the Three Principles. In another incident, the Ministry of International Trade and Industry (MITI), which handles all export licensing, also allowed Ishikawajima Harima Heavy Industries Co., Ltd., one of Japan's major defense contractors, to sell the Soviet Union a floating drydock, which has since been moored at Vladivostok to serve the Russian Pacific fleet. In the South Korean case, evidence suggests that the Japanese firm knew the military applicability of the "steel pipes" but nevertheless pursued the sale. The drydock, informed sources explain, was more a case of Soviet disavowal; Moscow contended that it was ordered for the fishing fleet.

Another view targets more of the blame for these decisions on the overriding tendency of the MITI bureaucracy to consider every export license in purely business/trade terms. "To ask this ministry to consider the potential military spinoffs of a commodity," a U.S. source explains, "is to force it to talk in unfamiliar terms." In short, if a commodity is not strictly military (armaments, missile systems, etc.) or subject to COCOM control, MITI tends to regard dual-purpose items as ordinary commodities. In the wake of Diet criticism over the steel pipes, though, the ministry has now become so cautious that it has balked at licensing exports of almost all commodities with potential military applicability.

Throughout the bilateral discussions on technology transfers, the United States has therefore made it known that it would like to see MITI, the Foreign Ministry and the Japanese Defense Agency agree on an inter-ministerial review procedure that would yield a more uniform assessment of the economic and security implications for the export of defense-related technologies. Washington's conception of the government-to-government agreement is that it would be an umbrella arrangement that would establish administrative ground rules, leaving the implementation of the transfers to defense firms in the two countries. (According to the State Department, an official agreement is necessary because of the possible exchange of classified material.) In addition, the United States would like its exemption from the Three Principles clarified. In return it would agree to bar exports to third countries since the exchanges are intended to enhance the U.S.-Japan defense alliance. Washington is also insistent that the review process be impervious to changes in personnel or to domestic political interference.

On the Japanese side, each of the relevant ministries has its own conception of an ideal technology transfer agreement with the United States. This is bound to prolong the consensus-building process and perhaps further delay the negotiation of an agreement. The Foreign Ministry has said that while it has virtually no reservations about the exemption from the Three Principles, it is uncomfortable with the umbrella arrangement and prefers that a formal agreement be concluded on each transfer request. This would involve the ministry more directly in an export-related matter — long the sacred domain of MITI. Washington has already let it be known that it finds this alternative unacceptable, since it is bound to entail excessive red tape, which would only serve to impede, rather than facilitate such exchanges.

MITI, on the other hand, has been reticent about exempting the United States from the weapons export ban. First, it is fearful of losing the "secrets of Japan's success;" that is to say, it suspects that U.S. defense contractors will try to rob Japanese companies of the technological innovations that have made them world-class competitors in the civilian sector. Second, in exempting Washington from the principles, a politico-

military factor is added to the equation. The requisite Foreign Ministry input, in practice, might lead to turf squabbles between the two ministries. Critics maintain that MITI still views defense technology issues as a trade problem and would prefer to approve exchanges on a case-by-case basis as trade concessions, rather than being obliged to consider such transfers under a government agreement that implicitly compromises MITI's administrative jurisdiction over exports. The United States has let it be known during the past three years that this is not a trade issue, but one involving the principles of cooperation under the defense alliance.

The Japanese Defense Agency (JDA) appears to be divided into two camps. On the one hand are those who view technology exchanges with the United States as a way of further solidifying the bilateral defense relationship. On the other there are those who advocate the development of a self-sufficient, indigenous defense industry. For the latter group, two-way technology flows tie the defense industry's development to the United States. These officials are prepared to accept certain economic inefficiencies in order to develop a viable Japanese defense base.

The Diet can also be expected to play a significant role as discussions on the umbrella agreement proceed. According to various Japanese press accounts, last summer Prime Minister Suzuki decided not to risk opposition party displeasure over an issue it did not regard as particularly important. The Japan Socialist Party and Japan Communist Party act as watchdogs for the Three Principles, and were in fact responsible for exposing the Korean steel pipe deal. They have come out against all technology transfers and can be expected to oppose any formal agreement with the United States on the grounds that it will undermine the weapons export ban and open the door to complete abandonment of the Three Principles.

Japan's Defense Industry: Nothing to Share?

A recurring complaint from Tokyo has been that the United States fails to specify what military technologies it wants from Japan. Washington has consistently replied that, at present, it has no particular technologies in mind but feels the potential exists for exchanges in later years. Indeed, a brief profile of Japan's miniscule defense industry shows that it has very little to offer the United States.

The government's historically small defense budget as well as the ban on arms exports have kept production of defense equipment very small and inefficient. It has therefore been impossible for the industry to achieve economies of scale that would permit low unit costs for its products. Since only large companies are capable of absorbing these high costs, the industry tends to be dominated by industrial giants who engage in defense production on the side. It has been estimated, for example, that it costs the Japanese nearly twice as much to license-produce the F-15 fighter aircraft as it would to import the finished product, and two to three times more than the cost of an import to develop a weapons system from scratch.

Moreover, given the small profit margin from sales of defense equipment (e.g. the JDA permits a profit margin of only 5 percent for naval vessels), there has been a general reluctance on the part of arms producers to embark on their own expensive research and development efforts. With only 1 percent of an already-small defense budget allocated for military research and development, it comes as no surprise that many Japanese arms produced with indigenous technologies are inferior to their American equivalents.

It has been suggested that since Japan's economic dependence upon defense procurement is so minimal, it does not need to reproduce or initiate the production of military equipment. That argument is refuted by certain government and industry

representatives who favor the development of indigenous weaponry, given the American refusal to share sophisticated "black box" technology with Japan, and the nation's geographic isolation from its chief ally. Thus, it would appear that for political and strategic reasons common to all industrial countries, Japan has tolerated and will continue to tolerate high costs in developing its domestic industry. These concerns, together with Washington's interest in achieving interoperability between U.S. and Japanese forces, have resulted in co-production projects covering a wide range of sophisticated military equipment. The Self Defense Forces' new F-15 fighters are being built by Mitsubishi Heavy Industries Co., Ltd., under license from McDonnell Douglas Corp. The Lockheed Corp.'s Orion (P-3C) antisubmarine patrol planes are being co-produced with Kawasaki Heavy Industries Co., Ltd. Last year, Nissan Motor Co., Ltd. paid Martin-Marietta Corp. an estimated $10 million for access to its advanced missile and space technology. All of these one-way technology flows add to the concern that the United States may be indirectly aiding and abetting the development of the Japanese civil aviation industry. Although it is undeniable that Tokyo is interested in the potential commercial applicability of U.S. military know-how, the long-term development of its defense industry is a significant factor in the equation.

In the near future, then, what military technology could Japan exchange that would be a useful contribution to the bilateral defense relationship? Probably nothing, The Economist contends, in a recent feature article on Japan's defense industry. But, it goes on, what the United States is probably most attracted to is Japanese production technology. When queried about this, however, Defense Department officials insist that it would be up to industry to decide where Japanese expertise and resources would be most effectively applied.

Conclusion: The Prospects for a Government-to-Government Agreement

It may take months for the official agreement allowing defense-related technology transfers to be concluded. For one thing, with the Diet still deliberating the fiscal 1983 budget, MITI, the Foreign Ministry and the JDA will not be in a position to seriously negotiate this question with the United States until the budget is passed. Concurrently, some type of inter-ministerial consensus will have to be reached concerning review procedures. U.S. sources therefore speculate that serious discussion cannot commence until late March or April. There is also interest in scheduling an S&TF meeting in early summer by which time the negotiations will be underway, making this a more meaningful meeting. At the same time, since criticism of co-production arrangements is bound to continue, any appearance of Japanese foot-dragging in these negotiations will make it increasingly difficult for State and Defense Department officials to refute these concerns, and legislation restricting such projects could conceivably reappear on Capitol Hill.

The Economist's prediction that Japan may soon become an arms exporter in competition with the United States, West Germany, France and Britain is not considered likely. When the official agreement is finally concluded, Defense Department officials explain, there is bound to be a lengthy trial period during which the respective industries will try to decide how best they can cooperate using complementary capabilities. It is highly unlikely in the foreseeable future that entire weapons systems will be exported to the United States or to any other country.

For further information, contact Barbara Wanner.

* * * * * *

Table 1: Top 20 Defense Companies, Based on Amount of Defense Contracts

(in thousands of dollars*)

		FY 1979	FY 1980
1.	Mitsubishi Heavy Industries, Ltd.	$422,059	$1,079,586
2.	Ishikawajima-Harima Heavy Industries Co., Ltd.	234,956	499,287
3.	Kawasaki Heavy Industries, Ltd.	215,754	373,717
4.	Mitsubishi Electric Corp.	173,735	333,165
5.	Toshiba Corp.	79,204	151,438
6.	Nippon Electric Co., Ltd.	72,455	102,693
7.	C. Itoh and Co., Ltd.	72,194	64,626
8.	Nippon Oil Co., Ltd.	59,523	59,379
9.	Japan Steel Works, Ltd.	44,805	56,479
10.	Sumitomo Heavy Industries, Ltd.	38,579	55,420
11.	Komatsu, Ltd.	37,272	55,328
12.	Hitachi Zosen Corp.	35,487	52,520
13.	Tokyo Keiki Co., Ltd.	33,354	43,222
14.	Hitachi, Ltd.	31,786	41,059
15.	Maruzen Oil Co., Ltd.	31,133	36,502
16.	Oki Electric Industry Co., Ltd.	29,217	35,673
17.	Shin Meiwa Industry Co., Ltd.	29,178	33,556
18.	Mitsubishi Corp.	29,174	31,945
19.	Daikin Industries, Ltd.	25,472	31,116
20.	Shimadzu Corp.	25,211	30,886
TOTAL		1,720,548	3,167,597

*The following average fiscal year exchange rates, which reflect the mid-point in the Tokyo spot foreign exchange market, were used to convert the yen production figures: FY 1979, ¥229.66 and FY 1980, ¥217.25.

Source: Far Eastern Economic Review, December 4, 1981, p. 76

Table 2: Changes in Composition of Defense Expenditures

(in billions of dollars*)

	FY 1977		FY 1978		FY 1979		FY 1980		FY 1981	
	Budget	Percent	Budget	Percent	Budget	Percent	Budget	Percent	Budget	Percent
Total	$6,591	100.0%	$9,439	100.0%	$9,120	100.0%	$10,266	100.0%	$10,549	100.0%
Personnel and Provision	3,627	55.0	5,137	54.4	4,687	51.4	5,063	49.3	5,030	47.7
Supplies	2,964	45.0	4,302	45.6	4,433	48.6	5,203	50.7	5,519	52.3
Equipment Acquisition	1,146	17.4	1,618	17.1	1,709	18.7	2,122	20.7	2,373	22.5
R&D	61	0.9	86	0.9	89	1.0	104	1.0	110	1.0
Facility Improvement	159	2.4	229	2.4	263	2.9	283	2.8	231	2.2
Maintenance	959	14.5	1,367	14.5	272	13.9	1,446	14.1	1,547	14.7
Base Counter-Measures	531	8.0	817	8.7	932	10.2	1,068	10.4	1,105	10.5
Other	108	1.5	185	2.0	168	1.8	180	1.8	153	1.5

*The following average fiscal year exchange rates, which reflect the mid-point on the Tokyo spot foreign exchange market, were used to convert the yen production figures: FY 1977, ¥256.53; FY 1978, ¥201.40; FY 1979, ¥229.66; FY 1980, ¥217.25; and FY 1981, ¥227.51.

Source: The Japan Times, Ltd., Defense of Japan, 1981, p. 295